

2011

VELOCITY World®
The Conference on TOC, Lean & Six Sigma



USMC AVIATION
*End-to-End AIRSpeed and Marine
Aviation Logistics Support Program II*

**GAME CHANGING STRATEGY FOR
ADVANCING AND SUSTAINING
WARFIGHTING CAPABILITIES**

Col Carmine Borrelli
HQMC ASL

Deputy Commandant for Aviation (DC/A)

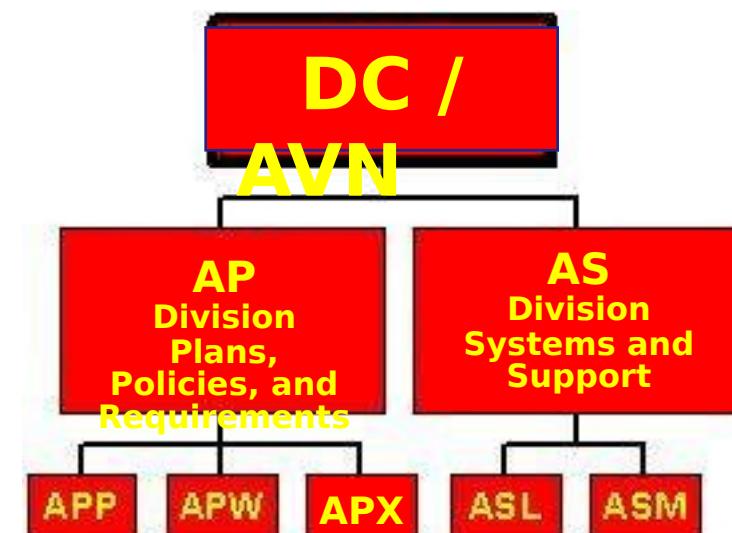
- Assists Commandant of the Marine Corps (CMC) in planning and coordinating staff activities on all matters related to

***Organization Equipment
Manpower Training
Support***

of Marine Corps aviation units and installations;

- Advises the CMC on systems acquisition and Joint matters related to aviation;
- Ensures Marine Corps aviation supports Expeditionary Maneuver From the Sea

DC/A runs Marine Aviation
Aviation Program.

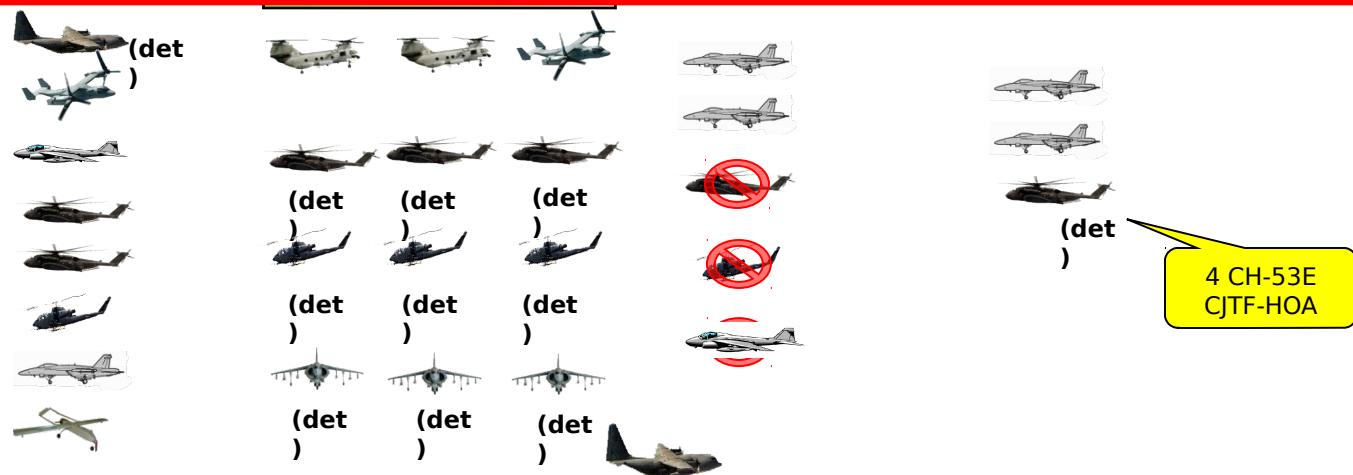


Current Operational Commitments

2011 Marine Aviation Tactical/Flying Active Duty = 62 Squadrans

Squadrons supporting deployments

= 23 (37%)



OEF

MEU (15th*, 11th)

UDP

TAI/Fwd Deployed

Squadrons in Work-Up to deploy next

= 20 (32%)

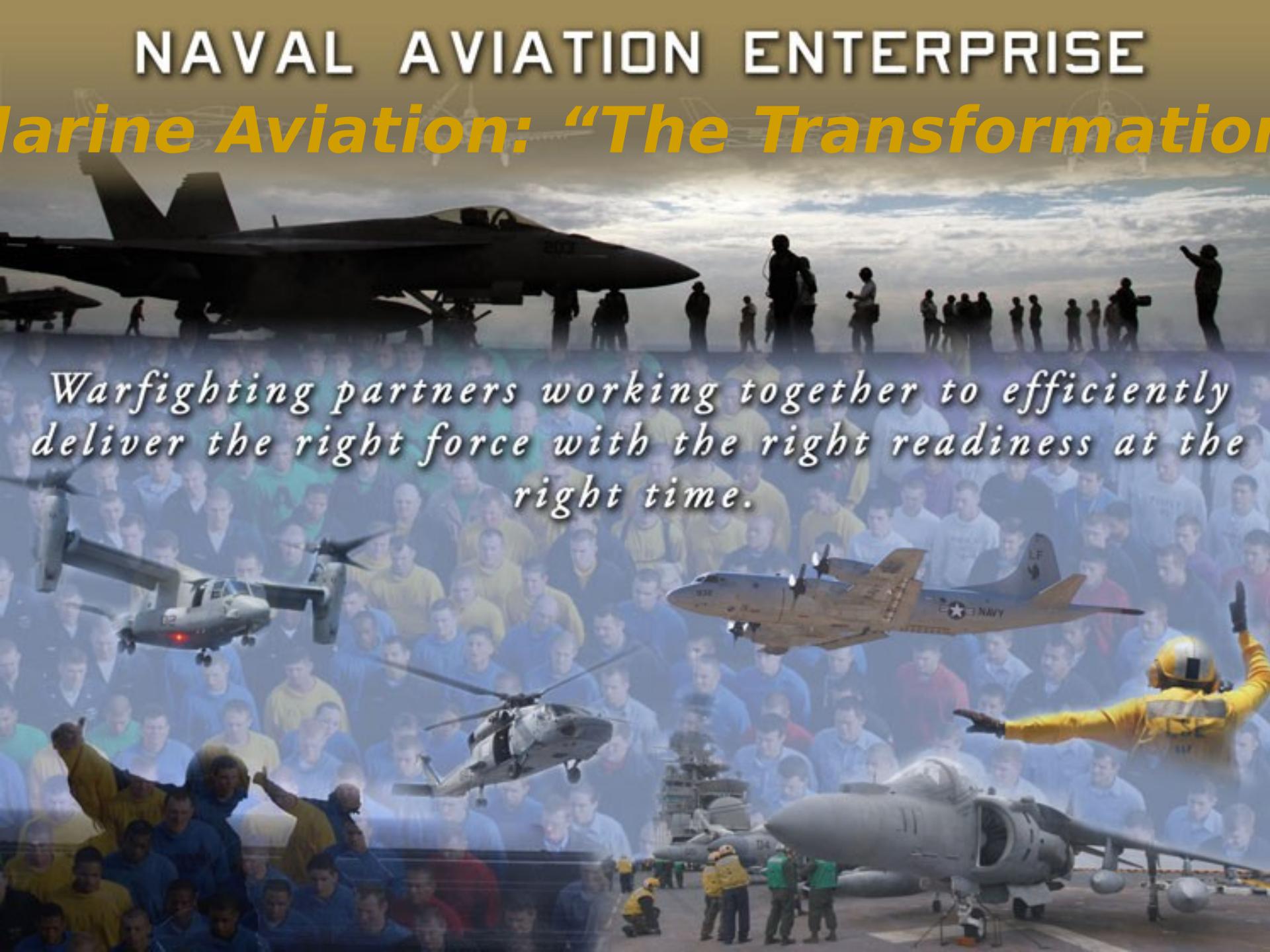


Marine Aviation In Transition



NAVAL AVIATION ENTERPRISE

Marine Aviation: “The Transformation”



Warfighting partners working together to efficiently deliver the right force with the right readiness at the right time.

Situation

- Experiencing most conservative fiscal environment
- Naval Aviation costly; Marine Aviation is 40% of Naval Aviation
- Maintaining future combat readiness requires efficient and effective resource utilization – readiness is not a pretense to justify wasteful behaviors

USMC Aviation End-to-End AIRSpeed and MALSP- II

- Understanding the journey
- Sustain gains
- Implement tools
- Focus on completing and sustaining transformation

***Game Changing Strategy For
Advancing And Sustaining
Warfighting Capabilities***

Understand the Journey

Challenges

- Wide spectrum of performance and engagement at all levels
- Education and preparation for leaders required
- Activities require focus and alignment
- Engagement of key leaders requires balance
- Efforts not owned and sustained; transformation ongoing
- Communication up, down, and across can be improved

'The Enterprise Making a Difference' Yes

More
training
time

airborne

- ❖ Recovered unfunded flight hours for training (\$33M)
 - ✓ Efficiencies recovered more than 6,100 hours within the OP-20 budget
 - ✓ At a nominal \$5500/FH, this created more than \$33M in training opportunities

- ❖ Arrested growth in Cost per Hour (CPH) rate
 - ✓ 1999-2003: avg growth rate was \$303/hr/yr
 - ✓ 2003-2008: avg growth rate was -\$55/hr/yr
 - ✓ 2008-2009: avg growth rate was \$158/hr/yr

- ❖ MV-22 Most Recent Success
 - ✓ 26% Cost Reduction: \$11,651 CPH in FY10 to \$9,670 CPH in Feb 11

More money
for parts,
equipment,
labor and fuel

'The Enterprise Making a Difference? Yes

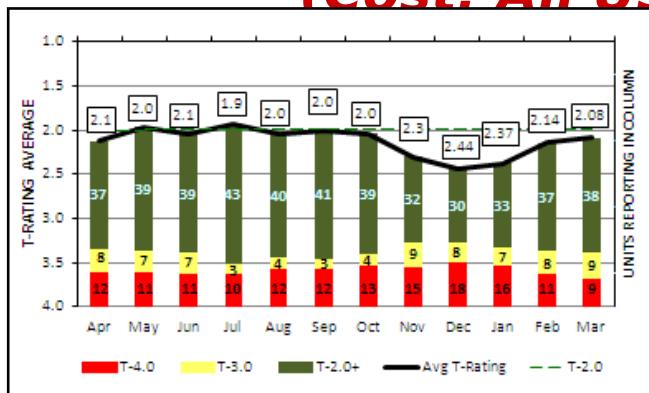
- ❖ Reduced USMC aircraft Ready For Tasking
 - ✓ USMC: 33% in Nov07 to 25% in Jun08 to 19% in Mar09
- ❖ Developed Maintenance Personnel Readiness metric
 - ✓ Measures certifications and qualifications even to the detachment level, truly reflecting a unit's maintenance personnel overall readiness

More shadows on the ramp

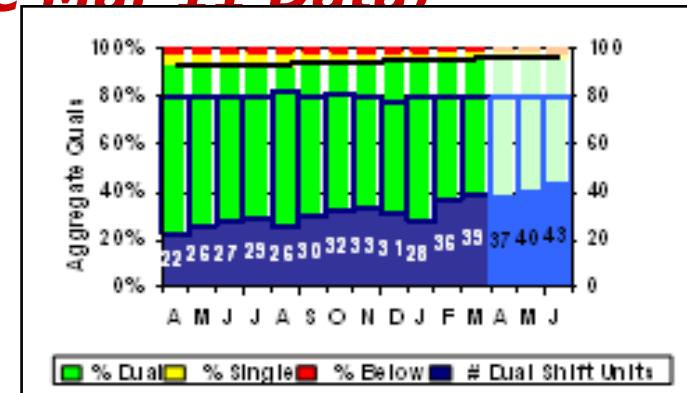
Better trained, more qualified workforce to meet any mission

USMC TOP 5 - All Type Model Series

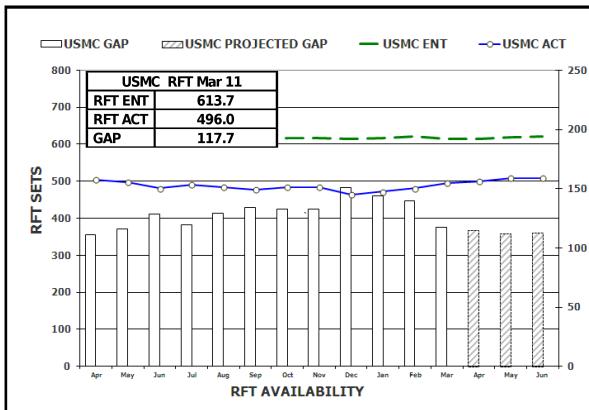
(Cost: All USMC Mar 11 Data)



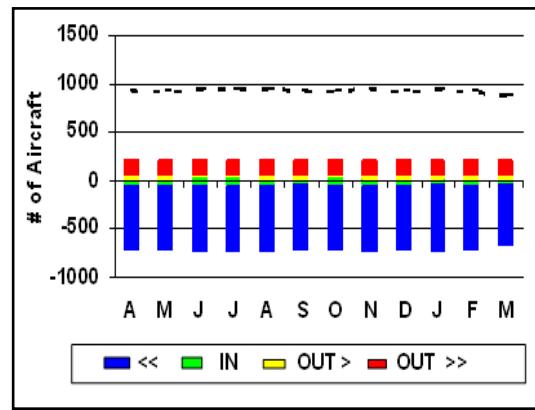
T- RATING



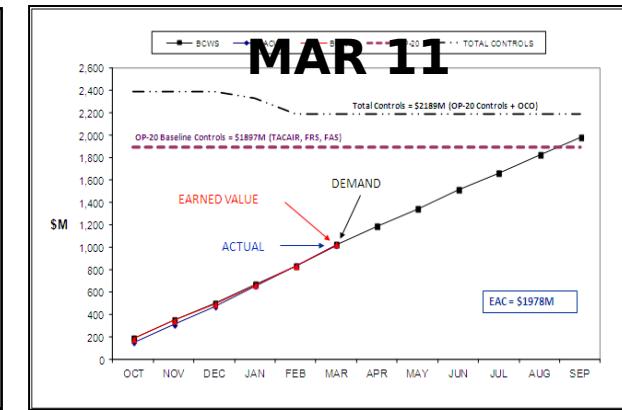
MAINTAINER CORE COMPETENCY



RFT AVAILABILITY



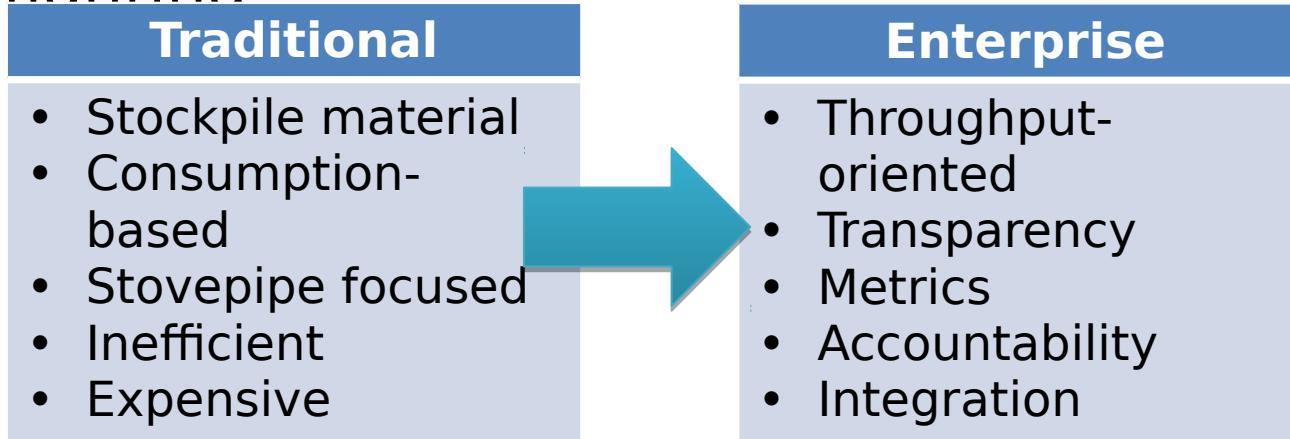
AIRCRAFT LIFE MANAGEMENT



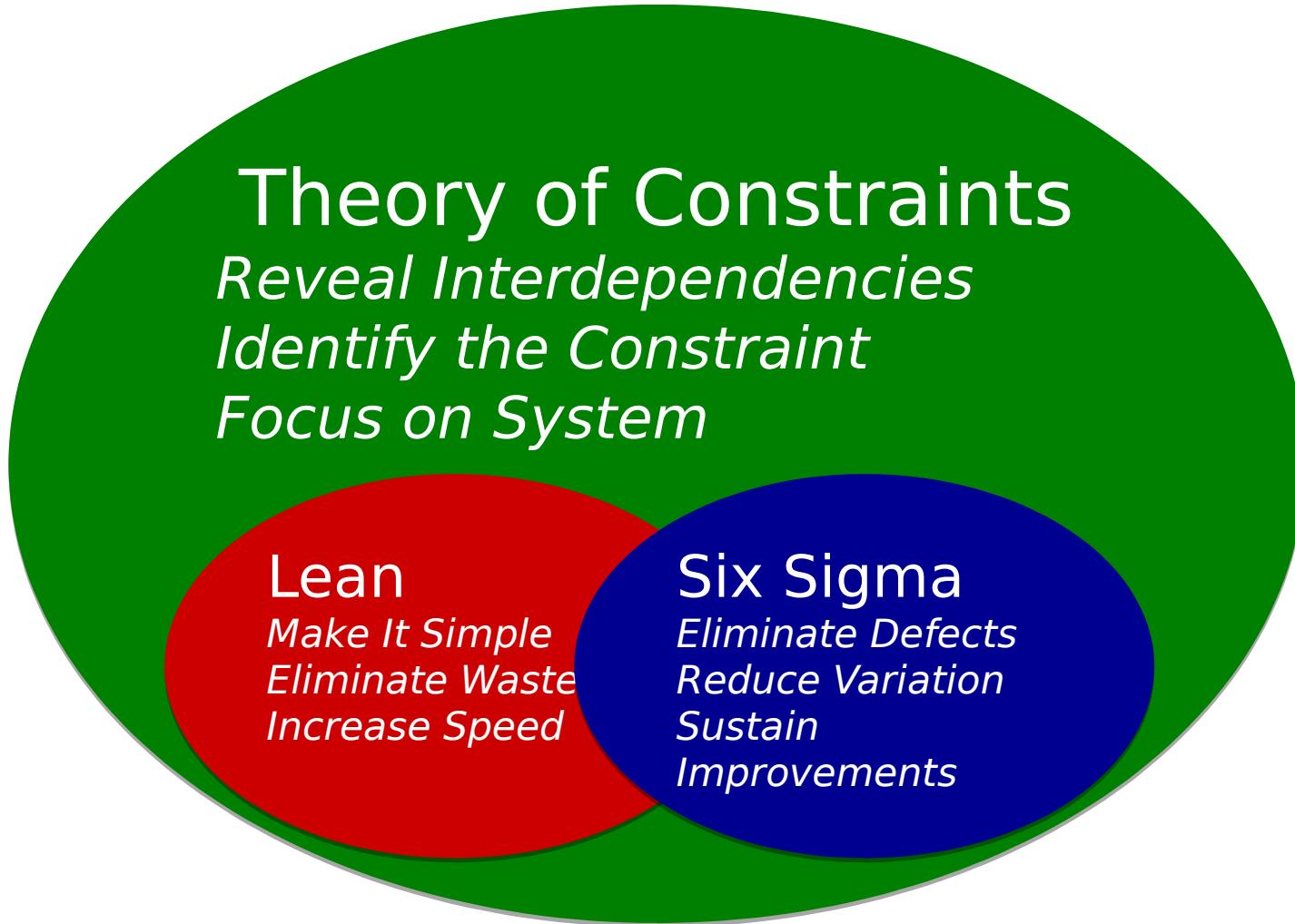
COST PERFORMANCE

The Transformation

- Logistical Change
 - Implement End-To-End AIRSpeed Across Marine Aviation: Organizational, Intermediate, and Depot Maintenance
- Cultural Change
 - Implement Leadership Strategy Process (LSP) Where and When Applicable
- MALSP II: Flexible, agile sustainment for warfighting



Strategy for Transformation



Strategy Enablers

End-To-End (E2E)

Leadership Strategy Process (LSP)

MALSP II

Understanding Current Readiness “Throughput”

Understand the Goal

Core Capable Unit
... *with a global perspective*

Squadron
12 Aircraft
42 Pilots [26 TPC/16 CP (T2P or T3P)]
36 Crew Chiefs
37 Loadmasters
<u>6 Aircraft Detachment</u>
20 Pilots [14 TPC/6CP (T2P or T3P)]
18 Crew Chiefs
19 Loadmasters
<u>3 Aircraft Detachment</u>
11 Pilots [6 TPC/5 CP (T2P or T3P)]
9 Crew Chiefs
9 Loadmasters

End-to-End AIRSpeed
Designed & aligned to
create reliable throughput
to TMS team RFT
requirements

GOAL
Core Capable
Unit
Global Perspective

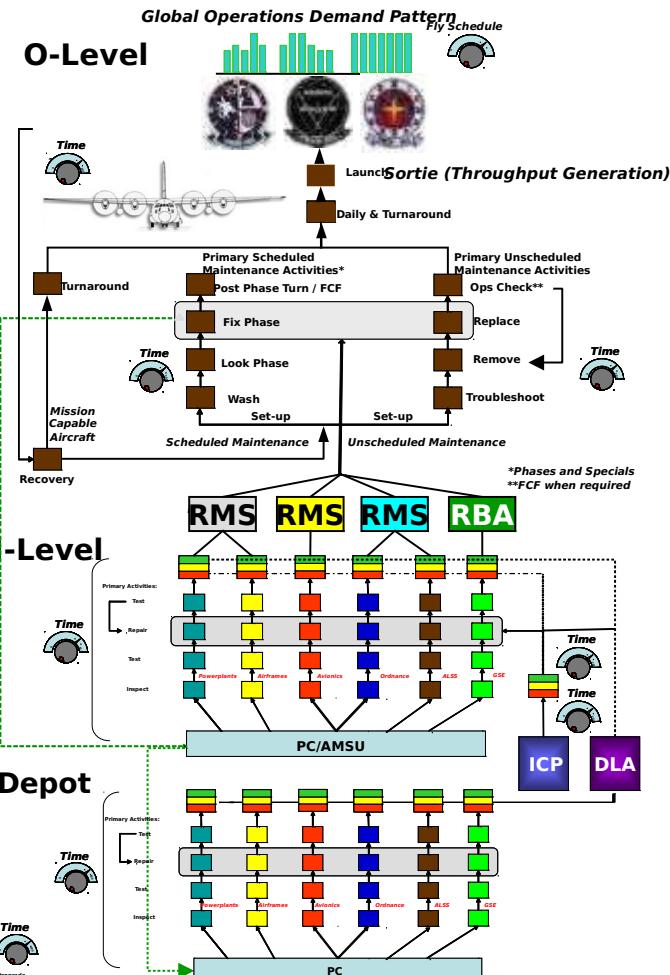
Community
Health
Unit Readiness
Goals vs.
Actual
(Variance)

**SMC TOP 5
METRICS**



Understand how the
System is Measured

Understand
the System

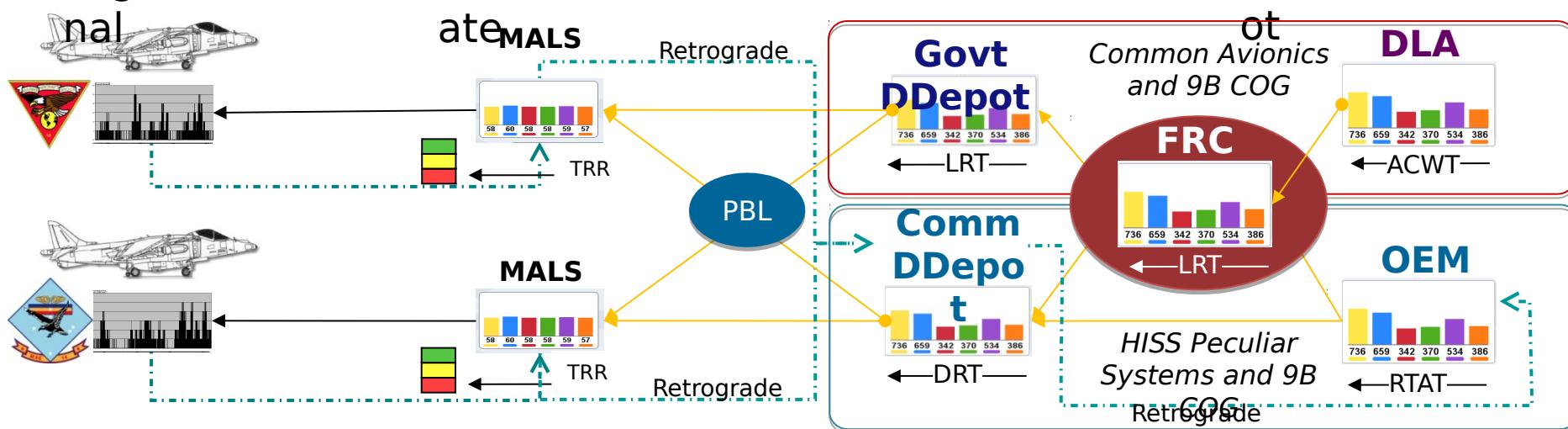


Creating Throughput - Big Picture E2E

'Getting the X' - A Series of Assembly Operations



Organizational Flow ↔ Intermediate Flow ↔ Deployment Flow



Flow



PMI-1 / PMI-2 / PMI-3



Flow



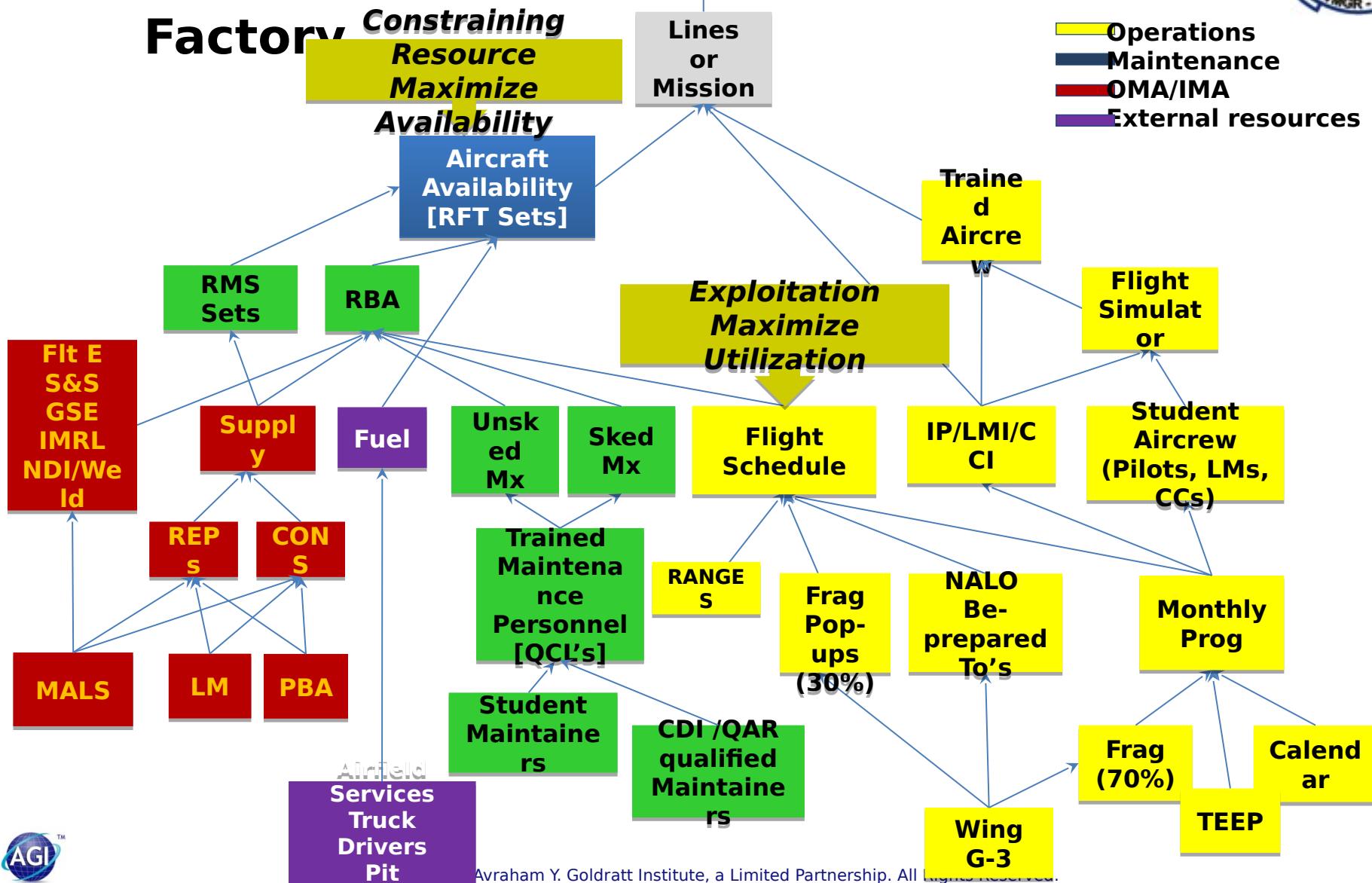
F402

The Aircrew Generation Factor

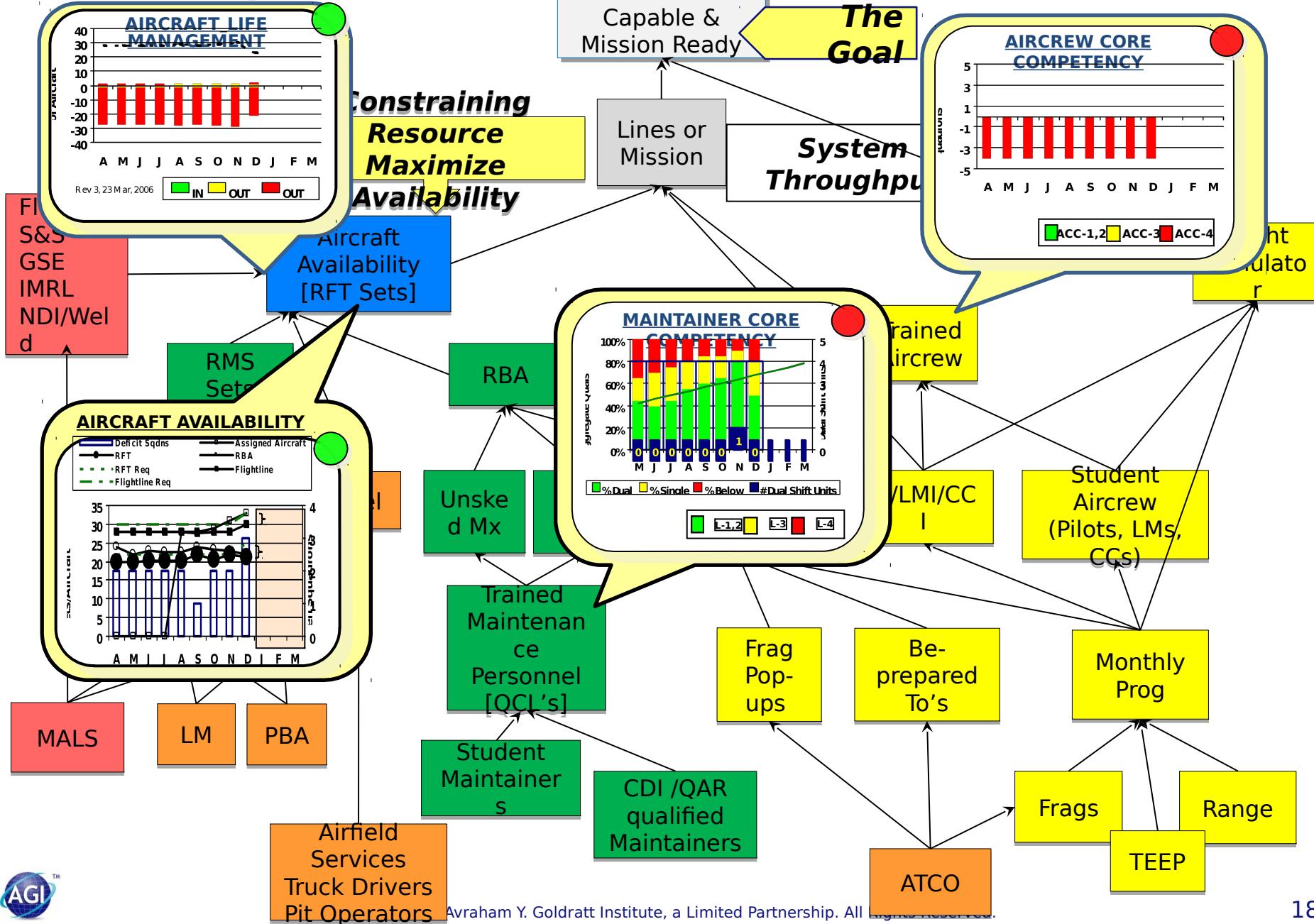


Unit that is Mission Capable & Mission Ready

The Goal

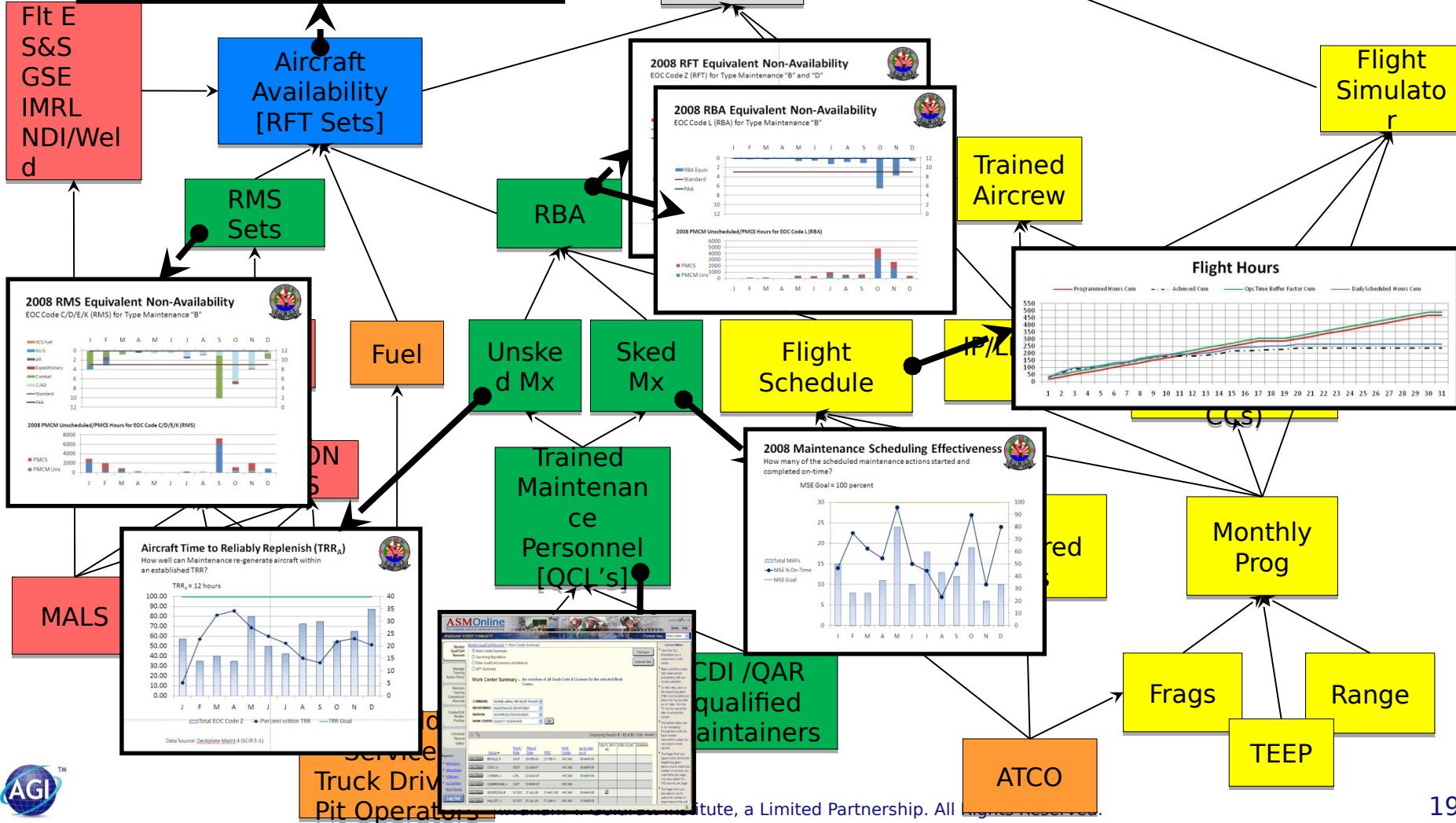
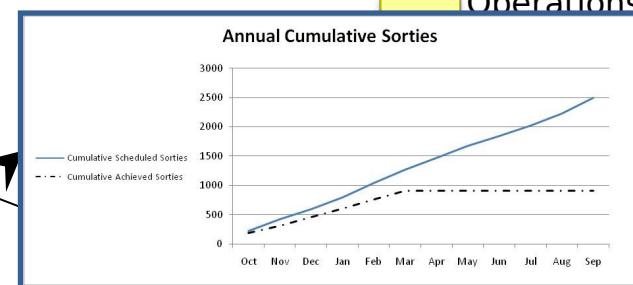
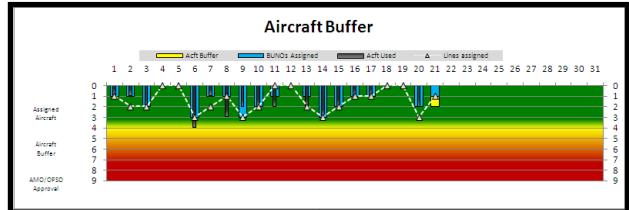


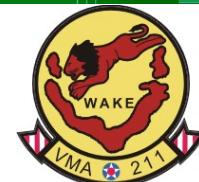
USMC Top 5 Metrics



End-to-End Measurements (MoEs) *reinforcing Good System Behavior*

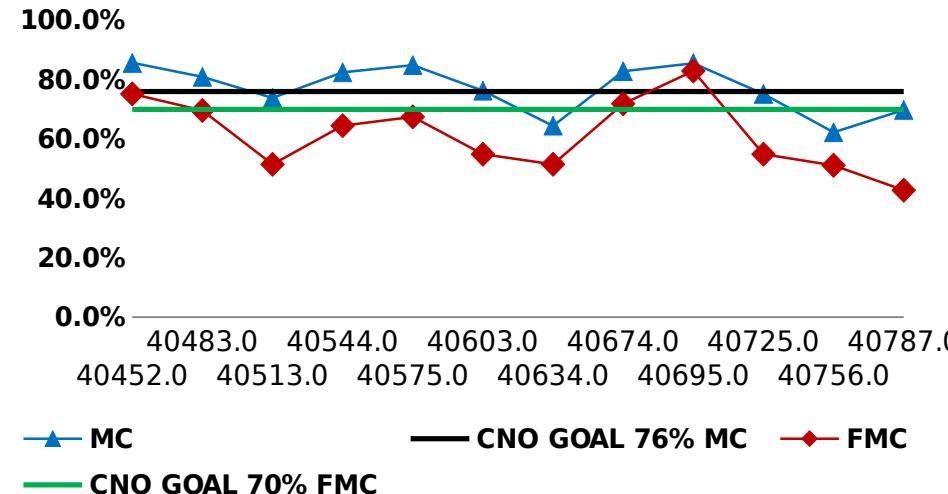
Unit that is
Mission
Capable &
Mission Ready





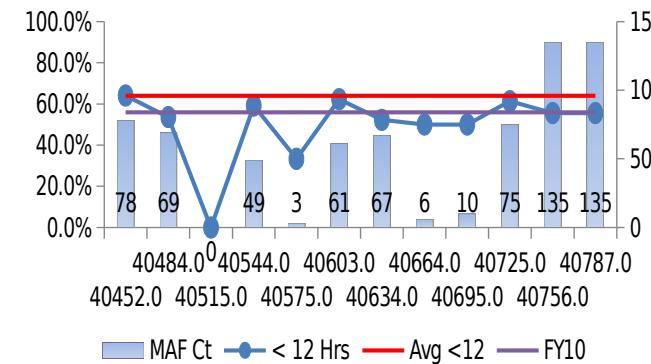
Time to Reliably Repair Aircraft (TRRA)

Mission Readiness



VMA-211 TRRA <12 Hrs

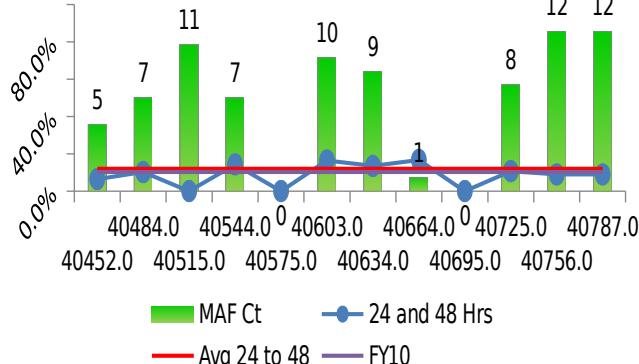
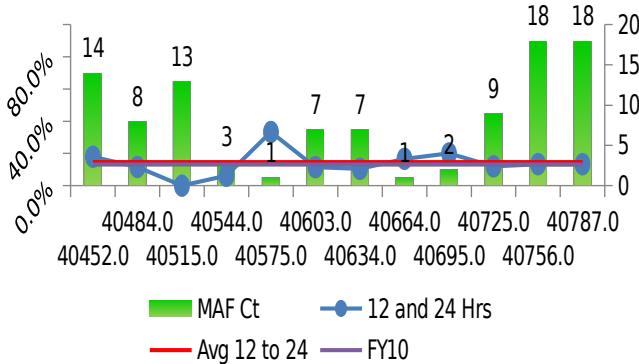
EOC Code "Z", WD Code "A,C,E,H,K" TM Code "B,D"



VMA-211 TRRA 12 to 24 Hrs

VMA-211 TRRA 24 to 48 Hrs

EOC Code "Z", WD Code "A,C,E,H,K" TM Code "B,D" EOC Code "Z", WD Code "A,C,E,H,K" TM Code "B,D"



Strategy Enablers

End-To- End (E2E)

Leadership Strategy Process (LSP)

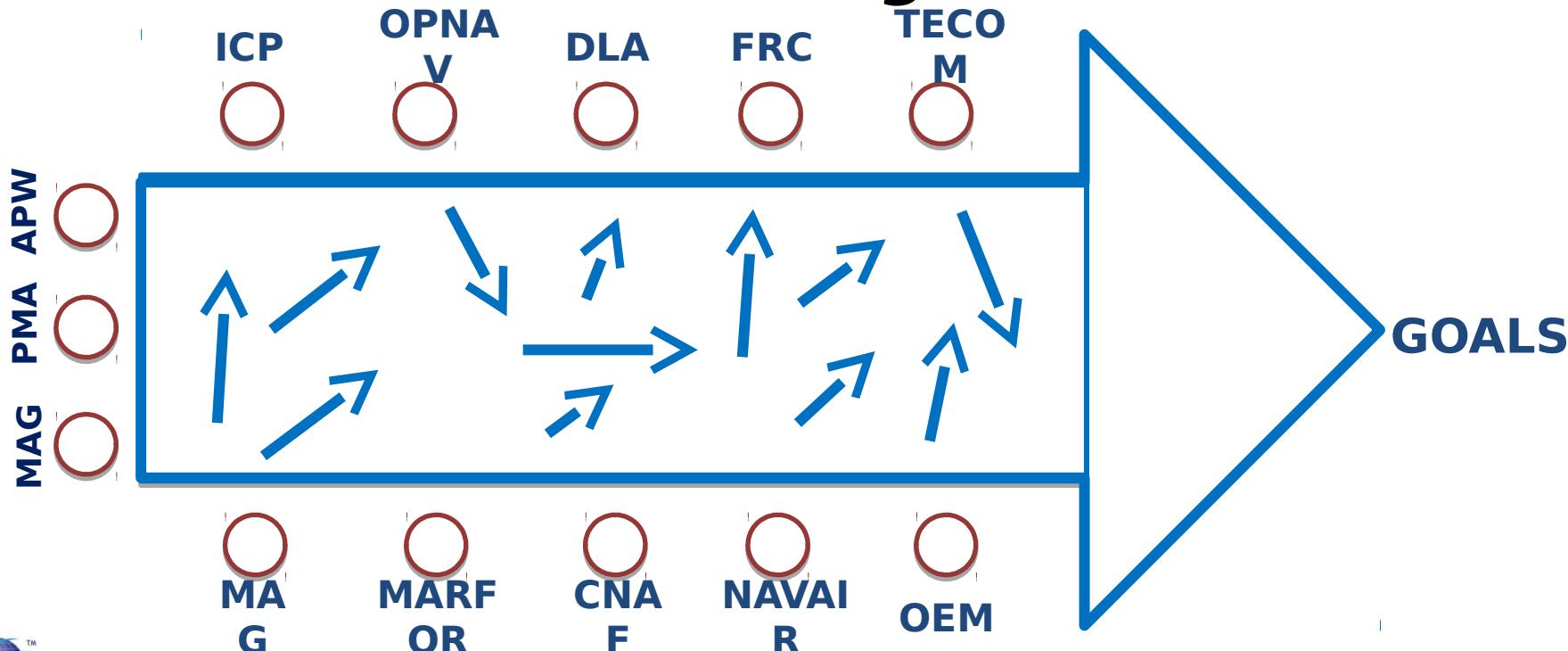
MALSP II

Leadership Strategy

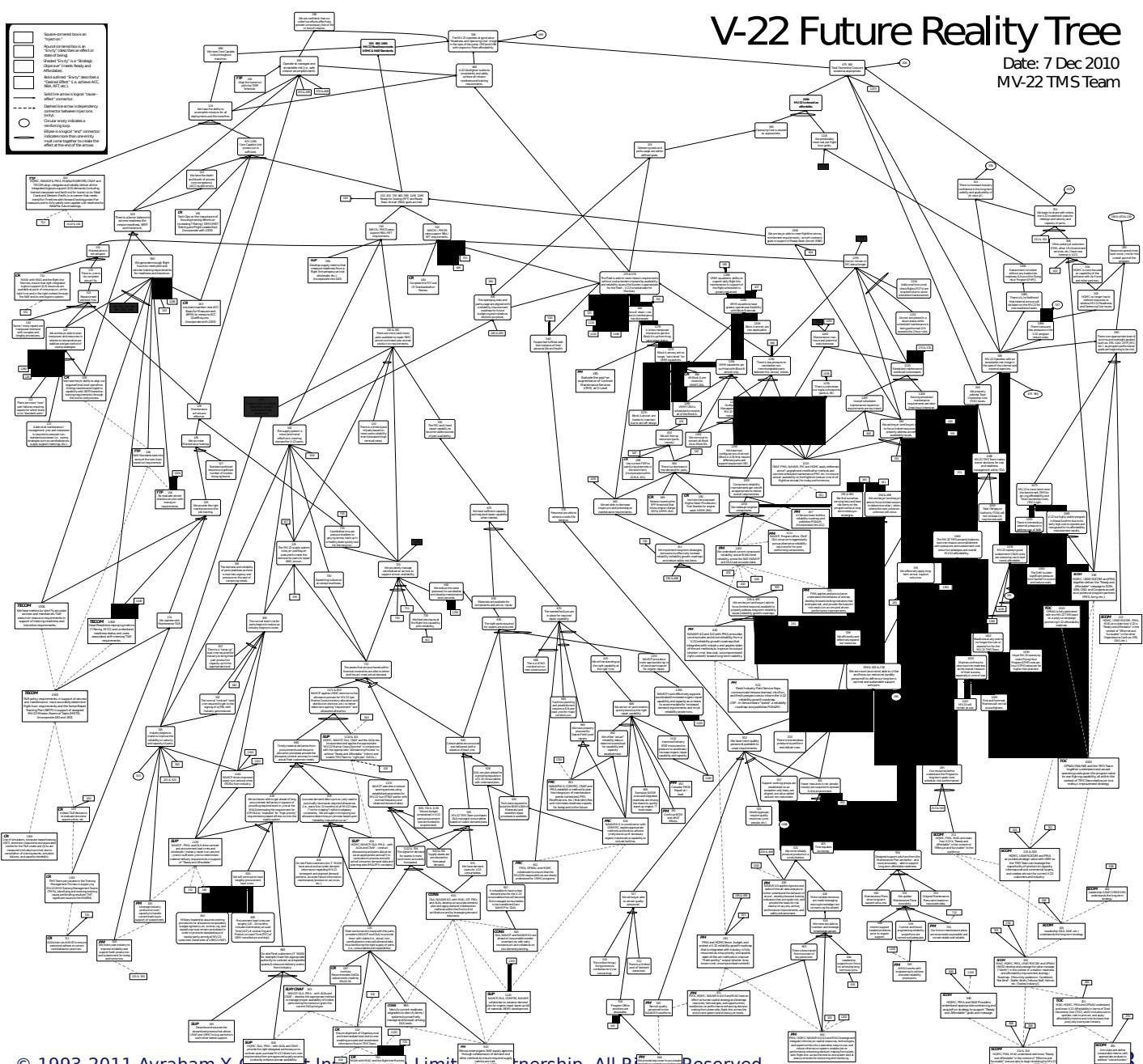
Process

*Aligns and Leverages Essential Cross-Command
Interdependencies Into an Integrated TMS Strategy
Owned, Led and Executed by the TMS Team*

'Before LSP Alignment'



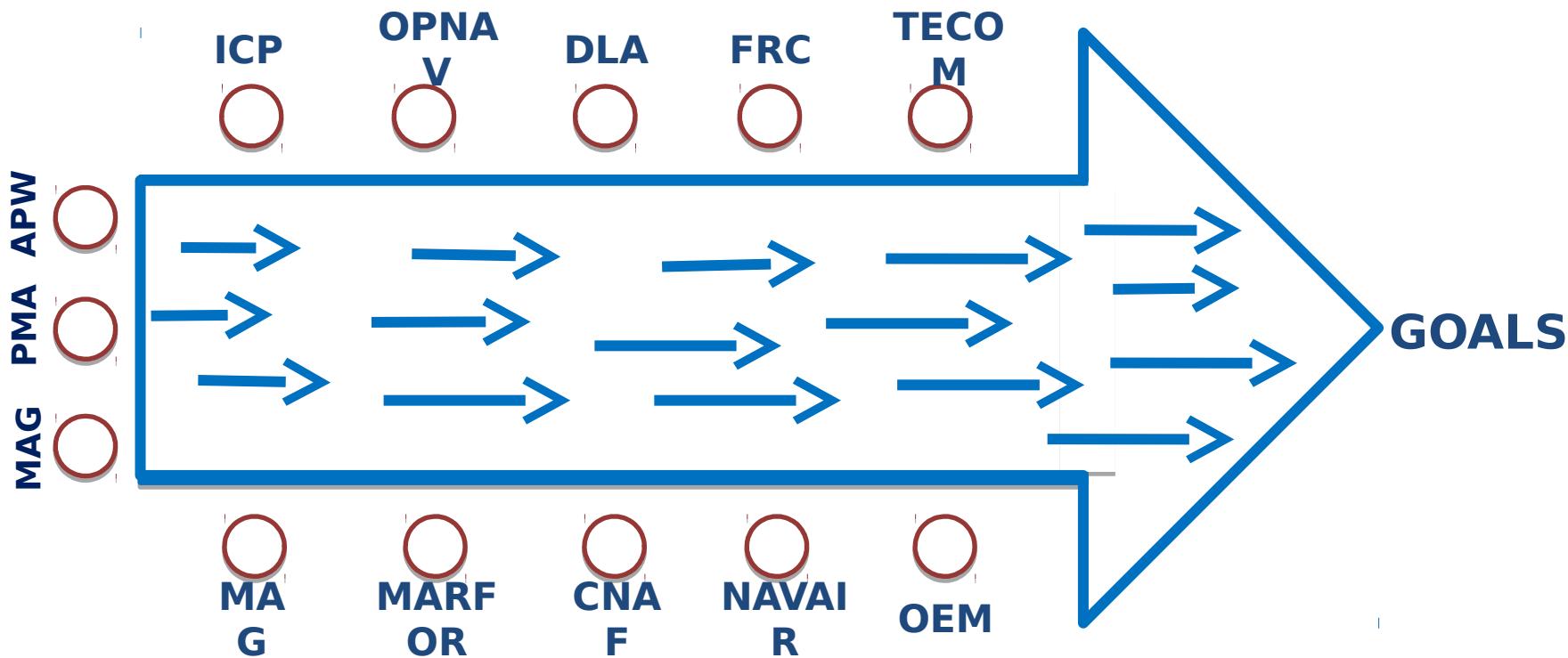
HQMC APP
HQMC APW
HQMC ASL
PMA-275
AIR 6.8
AIR 6.7
OPNAV
NAVICP
MARFORCOM
MARFORPAC
II MEF
I MEF
2D MAW
3D MAW
MAG-26
FRC
OEMs



MV-22 Leadership Strategy

Process

'After LSP Alignment'



MV-22 Leadership Strategy Process

- A comprehensive, strategic roadmap for the MV-22 Osprey Program
- Achieve a common, strategic goal to increase readiness at an affordable cost and meet TMS requirements established in the Current Readiness Program
- The TMS Team's foundation, central to managing cost and readiness challenges to match the effectiveness and survivability of this unique platform, now entering into its 7th combat deployment
- Uncovered obstacles within each individual organization's processes
- Identified the necessary operational condition modifications and operational requirements to overcome the institutional conflicts across the Enterprise and within other provider organizations

MV-22 Leadership Strategy Process

For example:

1. Critical Dynamic Component Team formed and solved three of eight readiness degraders
2. Propeller Rotor Gear Box recovery plan published to actively respond to supply shortfalls;
3. Number of 'long-term down' aircraft has been reduced from 18 to eight during the last year and a half.

"Leadership Strategy Process (LSP) is a proven key to unlocking constraints and aligning the NAE's collective strengths to increase the MV-22's readiness at an affordable cost."

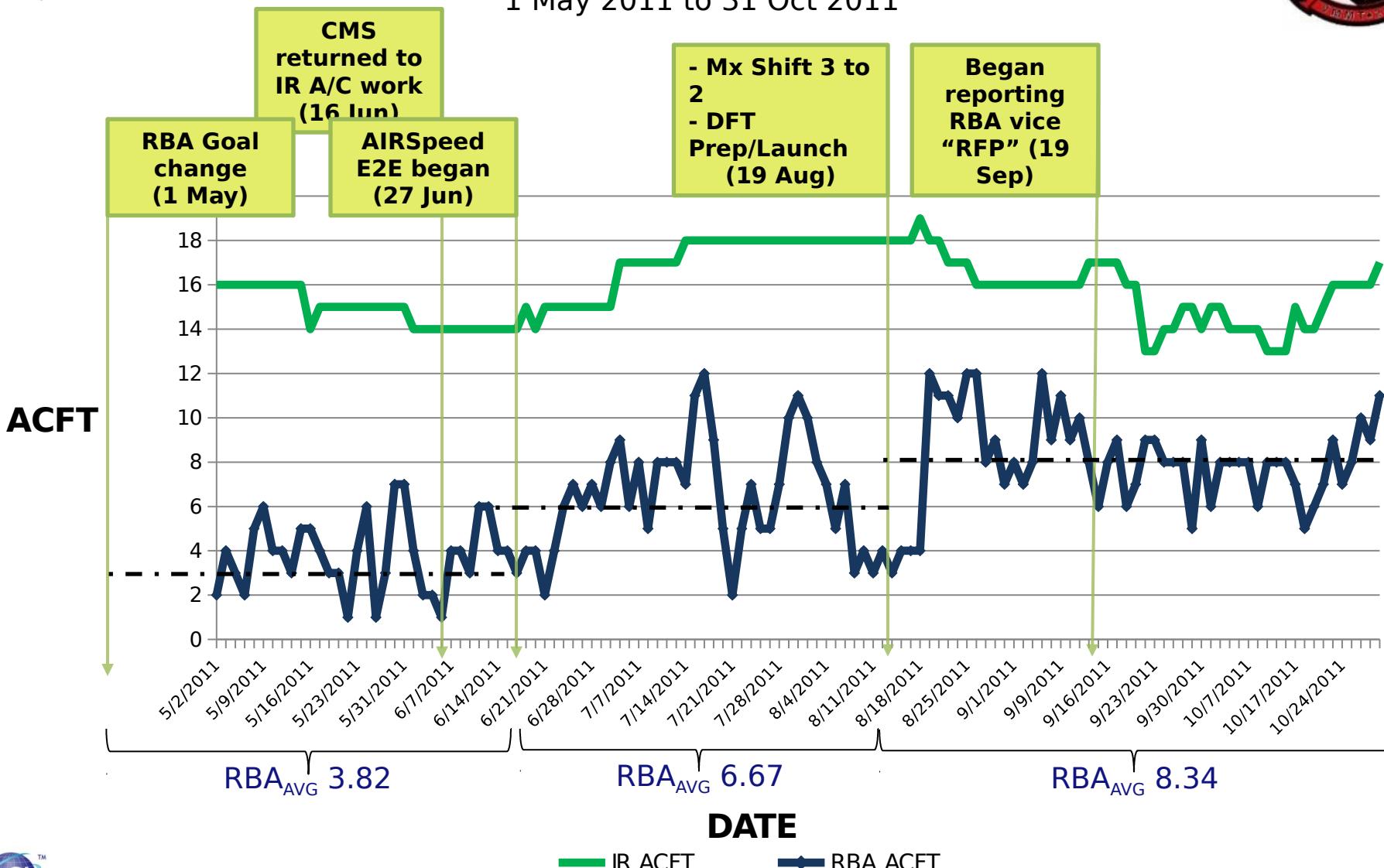
LtGen Robling, Deputy Commandant for Aviation



VMMT-204

Ready Basic Aircraft (RBA) Attainment

1 May 2011 to 31 Oct 2011



Strategy Enablers

End-To- End (E2E)

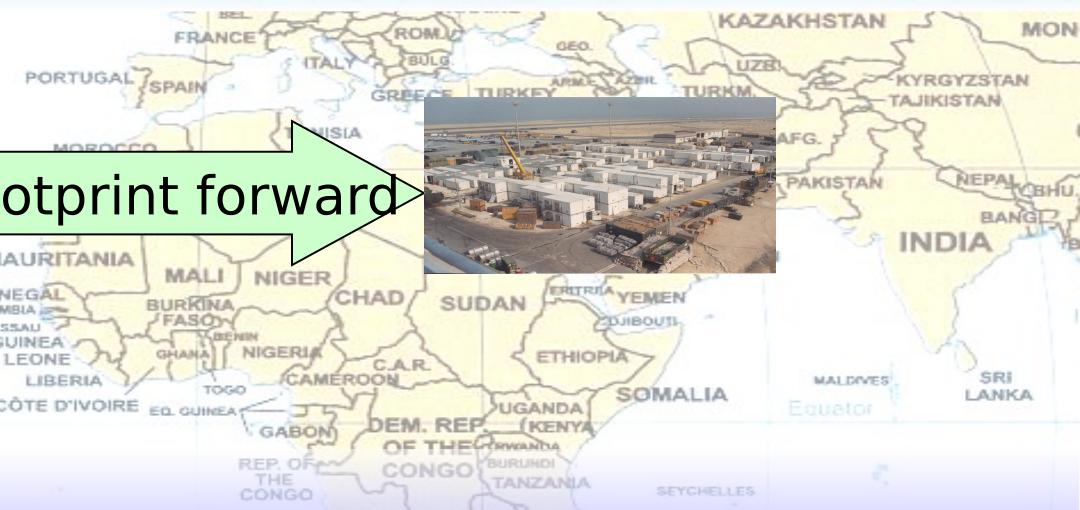
Leadership Strategy Process (LSP)

MALSP-II

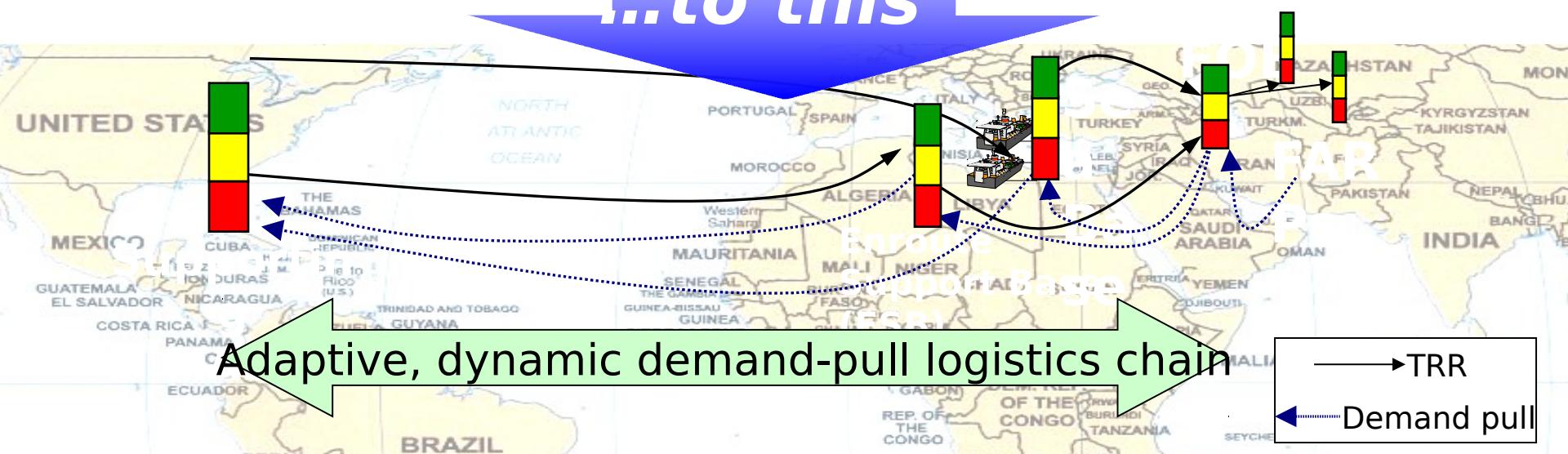
Transformation of MALSP

from this...

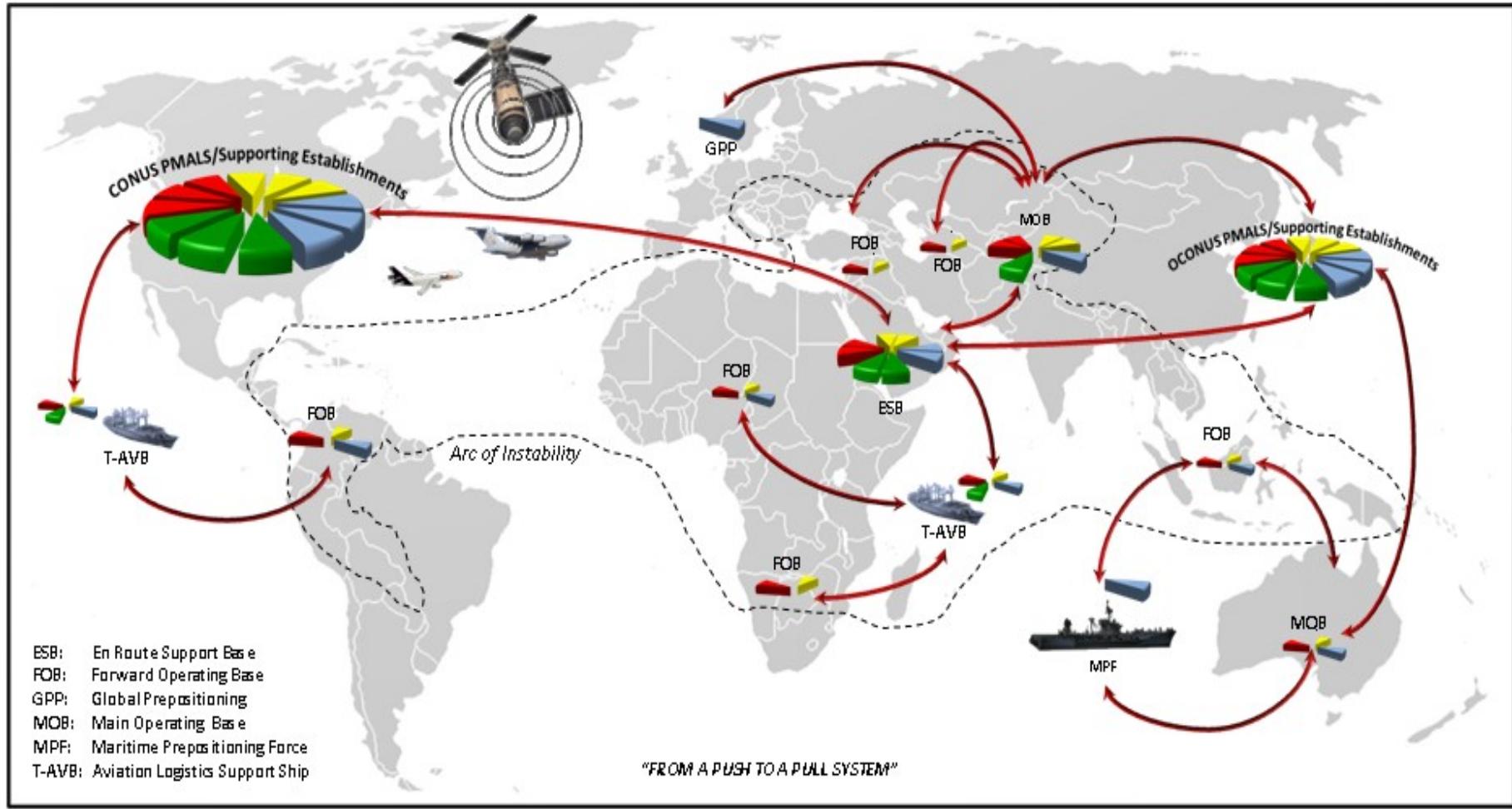
Push high-capable footprint forward



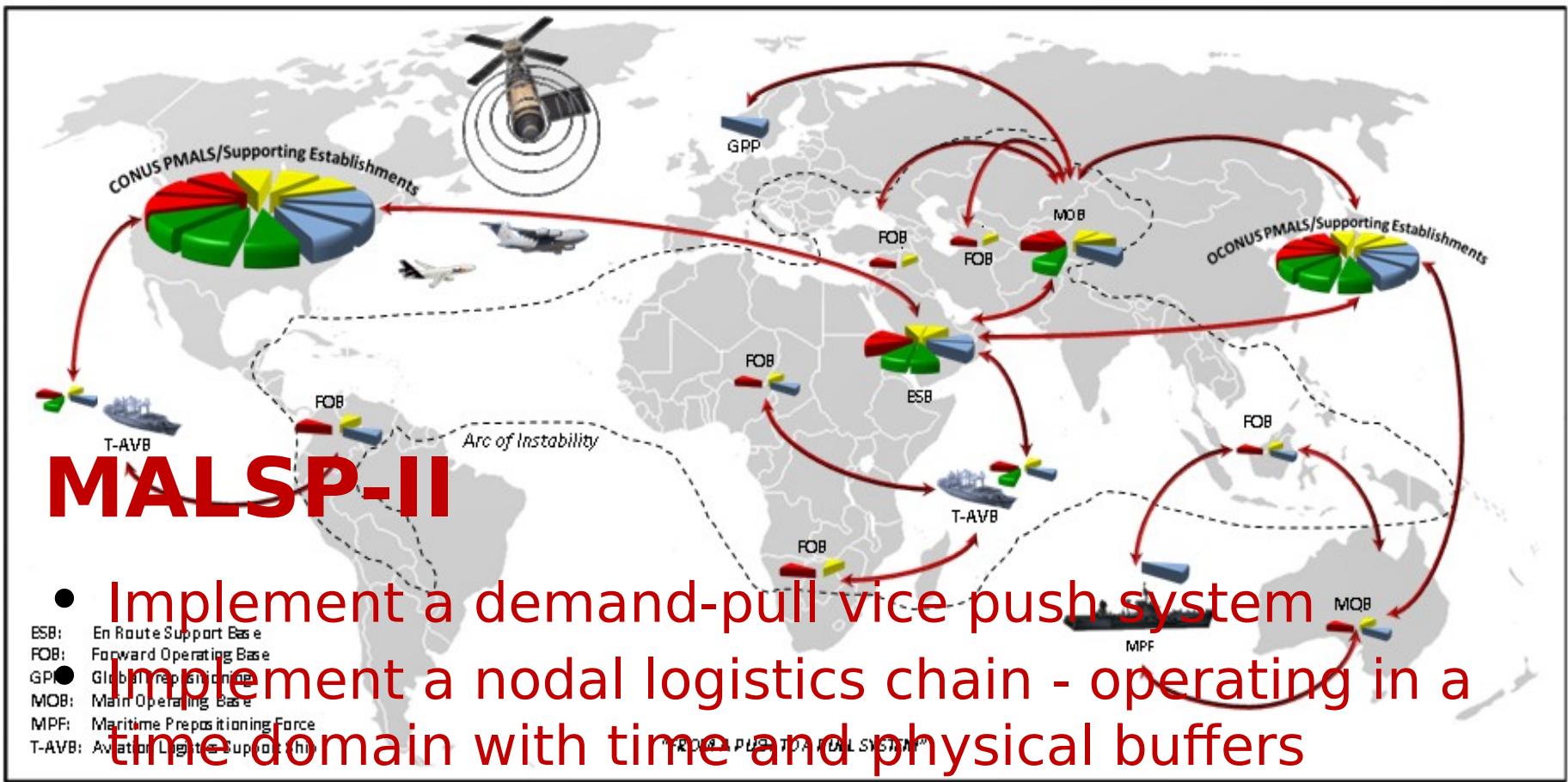
...to this



Marine Aviation Logistics Support Program (MALSP) II



Flexibility, Agility, and Responsiveness to Combatant Command



- Reduce the size of the “Iron Mountain” and associated infrastructure

Flexibility, Agility, and Responsiveness to Combatant Command

MALSP II - Depot Integration

Getting to a Demand-Pull Replenishment System:

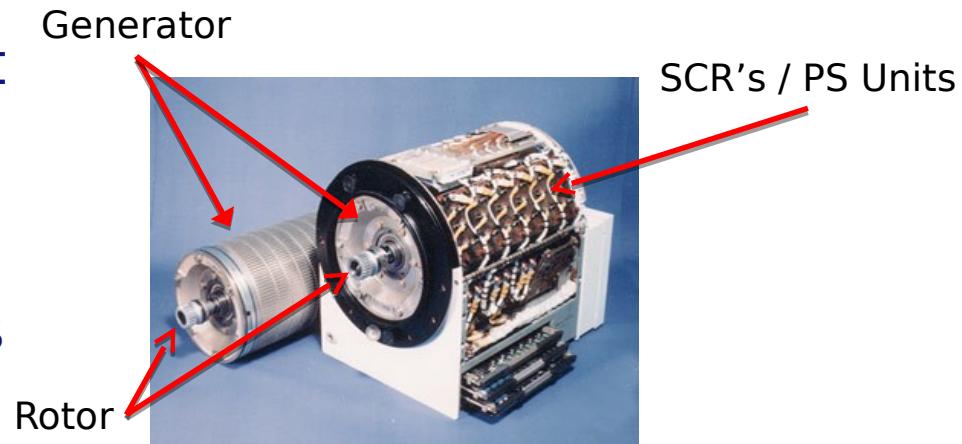
- Necessary sub-components (repairables and consumables) are available to facilitate rapid repair, i.e., which parts and how many
- Inductions are more closely linked to the time of fleet consumption
- Management focus is on asset movement in a pre-determined time frame (in-work to completion)
- Metrics targeted at maximizing Ready Basic Aircraft/Ready For Tasking for Beyond Capability of Maintenance-1* assets

* BCM-1: Depot level repair, no intermediate level repair authorized

MALSP II - Depot Integration

F/A-18 Generator Control Unit

- Number 1 readiness degrader
- Number 1 cannibalization item
- Highest Aviation Depot Level Repairable (AvDLR) driver (\$\$\$\$\$)



Note: For reference only, exact model not shown

Site	Before	After
FRC Oceana (East Coast)	TAT = 42 days/39 carcasses	TRR = 9 days/11 carcasses
FRC Southwest (West Coast)	TAT = 39 days/131 carcasses	TRR = 10 days/23 carcasses

~~AvDLR, improved repairability to meet demand and~~
eliminated gaps in aircrew training and contingency operations.

“No backorders on SCRs and no GCUs Ex-Rep for SCRs for the first time in years...”

*DAPML for Secondary & Electrical Power for
PMA-265 33*

MALSP II - Depot Integration

AN/APX-100 IFF Transponder

- Number 1 PMC readiness degrader, all TMS

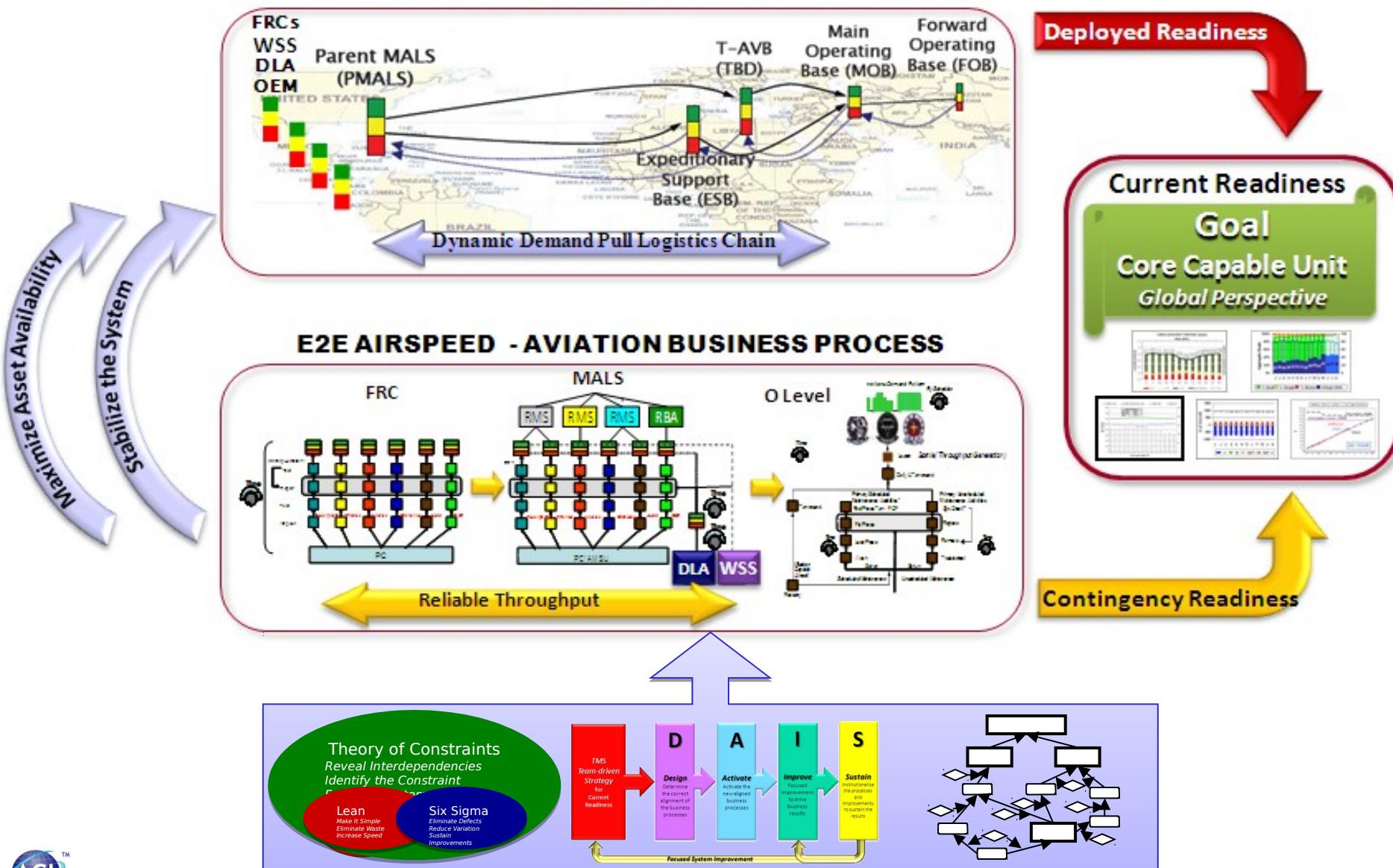


Note: For reference only, exact model not shown

FRC Southwest	Result
Repair Velocity	TAT = 138 days to TRR = 20 days
Workload Actual to Standard	<input type="checkbox"/> 40 percent (WRA) / <input type="checkbox"/> 47 percent (SRA)
Infrastructure Alignment	3 rd Shift Operations eliminated; Five civilian Full Time Equivalents (FTEs) reassigned

Aviation Supply & Logistics Strategic Roadmap

MALSP II - E2E AIRSpeed EXPEDITIONARY EXTENSION



Summary

- USMC Aviation Warfighting Capability; Advancing and Sustaining while Transitioning & Transforming
- Maintain Successes – Establish Policies, Improve Education and Align Activities
- Sustain the Transformation – End-to-End AIRSpeed logistical change; Leadership Strategy Process cultural change, MALSP II flexible, agile sustainment for warfighting

Questions?

